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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,219	12/19/2000	Adam Bosworth	41016.P004	7676

25943 7590 01/16/2004

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EXAMINER	
VU, TUAN A	

ART UNIT	PAPER NUMBER
2124	4

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/741,219	BOSWORTH ET AL.
	Examiner	Art Unit
	Tuan A Vu	2124

-- The MAILING DATE of this communication appears on th cover she t with th corr spondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2000* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is responsive to the application filed December 19, 2000.

Claims 1-21 have been submitted for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> Note: 35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

3. Claims 1, 2, 4, 9 and 11-12, 14, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Nasr et al., USPN: 6,438,540 (hereinafter Nasr).

As per claim 1, Nasr discloses a method of computing comprising:

analyzing a data processing specification having a plurality of data processing cell specifications (e.g. Fig. 2; *query ... instructions* – col. 3, lines 58-65; Fig. 4 – Note: instructions enclosed between tags are equivalent to cell specification) with each data cell specification containing a formula specifying an action or computation (e.g. *Action 830* –Fig. 8);

determining a tree of elements (e.g. *document tree, based on tags and attributes* – col. 4, lines 4-48; Fig. 4, 8) of said actions/computations specified by said data processing cell specifications; and

effectuating the data processing specified by the data processing specification in accordance with the determined hierarchical order of said actions/computations specified by said data processing cell specifications (e.g. col. 4, line 25 to col. 5, line 5).

Nasr does not explicitly specify determining the execution order of said actions/computations even though discloses the tree (hierarchy) of parsed elements to process the XSL based instructions (e.g. col. 6, lines 50 to col. 7, line 7; Fig. 3, 4) thereby discloses a certain order constraint (e.g. *parent/child, predicate algorithm* - col. 5, lines 7-30) in executing the query. Therefore the step of determining the execution order and effectuating the data processing in accordance with such execution order is implicitly disclosed.

As per claim 2, Nasr discloses cell defined between beginning and end tags (e.g. Fig. 8).

As per claim 4, Nasr discloses one or more attribute specifications (e.g. col. 5, lines 7-11; *element type*- Fig. 8).

As per claim 9, Nasr discloses global attributes (e.g. *sd=0 ... TITLE, COSTUME* – Fig. 4 – Note: subtree depth being zero is equivalent to highest level of attribute common to all nodes of the subtree, i.e. attribute global to subtree cells).

As per claim 11, this apparatus claim corresponds to method claim 1 for it recites the same steps of analyzing, determining, and effectuating as in claim 1; hence will be rejected with the corresponding rejections as set forth in claim 1. Nasr further discloses one processor coupled to one storage unit having stored thereon the program instructions designed to provide the above steps (Fig. 5, 6).

As per claims 12, 14, 19, these are apparatus claims of claims 2, 4, 9 respectively; hence will be addressed with the same rejections as set forth therein, respectively.

As per claim 21, this claim is the apparatus claim of method claim 1 for it includes means for performing the same steps of analyzing, determining, and effectuating as recited therein; hence will be rejected using the same corresponding rejections as set forth therein.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 5, 8, 10, 13, 15, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasr et al., USPN: 6,438,540, as applied to claims 1, 4, 11, 14, 19; in view of Lipkin, USPubN: 2002/0073080 (hereinafter Lipkin).

As per claim 3, Nasr does not explicitly specify one second cell specifying having a action referencing a value of a first cell but discloses hyperlinking in markup specification (e.g. *hyperlink* - col. 7, line 57 to col. 8, line 10) and XSL based parsing (Fig. 8) to effectuate query instructions. In a method to enhance XSL and query language analogous to Nasr, Lipkin discloses XSL-based action/formula (e.g. *value-of select=* -- pg. 59-62) from one cell to reference a value defined in another cell (e.g. *$ORDERITEMID, $STUDENTID, @idref* – pg. 56, line). In case Nasr's method does not already include such referencing, it would have been obvious for one of ordinary skill in the art at the time the invention was made to enhance the query language specification of Nasr with its hyperlinking or referencing tags so that Nasr's XSL specification cell includes a formula referencing of value defined in another cell as taught by Lipkin because referencing a value defined elsewhere in

another cell by an action specified in the calling cell is one of the most basic referencing asset in programming language in that it can make use of already defined resources more efficiently by just defining a pointer/reference tag to retrieve such memory value.

As per claim 5, Nasr does not explicitly specify one cell having attribute referencing data of another cell. In view of Lipkin's teaching from above, referencing data defined in another cell has been disclosed. Hence, this limitation has been addressed above using the teaching by Lipkin to combine with the attribute specification and hyperlinking by Nasr for the same rationale as set forth in claim 3.

As per claim 8, Nasr does not specify a specification cell comprising a conditional executed formula; but Lipkin discloses a conditionally executed cell (e.g. *<xsl: if ...> ... </xsl: if>* - pg. 61; *<condition .. </condition>*, para 1104, pg. 74). In view of the finding of candidate data for correctness checking and/or mapping of attributes for correct data retrieval as suggested by Nasr (Fig. 2; col. 1, line 21 to col. 12, line 42), it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Nasr's specification cell so that conditional cell be implemented to address an execution based on a condition because this conditional execution cell can be reused and passed as reference and the conditional execution would have obviated resources usage had the query execution be directed into an erroneous path just like a mis-predicted branch would have consumed processing resources.

As per claim 10, Nasr does not teach a global attribute specifying a format even though Nasr discloses HTTP request (Fig. 7). Lipkin, in the method to manage information having server to retrieve data from database like processing query by Nasr, disclose XML global attribute specifying a XML format *(?xml=version, xsl= stylesheet version ...XSL/Transform ...*

xmlns=xsl -- pg. 42, 46). In case Nasr's specification language does not already provide a global attribute specifying a HTTP protocol format, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement a global attribute specifying the protocol format to Nasr's specification XML language, such format based on which communication data are parsed, transformed and displayed as taught by Lipkin. The motivation would have been that with such global specification of format protocol, the fundamental and foremost knowledge of how data are to be parsed and handled would be more defined and that such knowledge would help avert format conflict during data processing of HTTP requests and subsequent display of returned data, a concept which is well-known in the HTTP-based or internet communication.

As per claims 13, 15, 18, 20, these are apparatus claims of claims 3, 5, 8, 10 respectively; hence will be rejected using the corresponding rejections as set forth therein.

6. Claims 6, 7, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasr et al., USPN: 6,438,540, as applied to claims 1, 11; in view of Srivastava et al., USPubN 2002/0120685 (hereinafter Srivastava).

As per claim 6, Nasr discloses retrieving data from a database using stylesheet specification but does not explicitly specify cell specification comprising a mnemonic for providing input to the data processing specification; but nevertheless discloses value attribute processed via a tree (*step 221* - Fig. 2; col. 4, lines 4-42); hence suggests some providing of attribute value passed as arguments to the next query executing code. Srivastava, in a similar method using XML and metadata for supporting database query analogous to the XML/XSL combination scheme by Nasr, discloses the use of special tag nomenclature to serve as input cell

(e.g. <input>...</input> -- pg. 43). In view of the need for passing input attributes to the sequence of querying instructions as suggested by Nasr from above, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the query specification cell by Nasr so that a special cell enclosing a special tag or mnemonic is implemented to encompass a input specification as suggested by Srivastava. The motivation is that by enclosing input data as by a special mnemonic in a specification cell, the amount of data serving as input to the next data retrieving instruction would be more individualized as a separate entity and such entity can be passed by reference to subsequent querying instructions, making the processing of data more efficient.

As per claim 7, likewise, Nasr does not specify a cell being reserved for an output of data but Srivastava discloses an output cell (e.g. pg. 46). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the query specification cell by Nasr so a specification cell is reserved as output cell as taught by Srivastava because providing such output cell to the query processing tree and results yielding by Nasr (see Nasr: Fig. 1, 1B, 2) would enhance the processing efficiency in that passing input and output cells would alleviate resources by simply using a reference to such cells, just as mentioned in the rationale as set forth in claim 6 above.

As per claims 16, 17, these are apparatus claims of claims 6, 7, respectively; hence will be rejected using the corresponding rejections as set forth therein.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat No. 6,675,354 to Claussen et al., disclosing XML/XSL tag processing and DOM tree.

U.S. Pat No. 6,101,511 to DeRose et al., disclosing sytlesheet and formatting of documents using a tree.

Bex et al., "A Formal Model for an Expressive Fragment of XSLT", July 2000, First International Conference on Computational Logic, Imperial College, UK, disclosing creating of XML and XSLT metadata for data match/query.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or: (703) 746-8734 (for informal or draft communications, please label "PROPOSED" or "DRAFT" – Please consult Examiner before use)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA. , 22202. 4th Floor(Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

VAT
January 11, 2004

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SUPERVISORY PATENT EXAMINER
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